

LOAN DOCUMENT

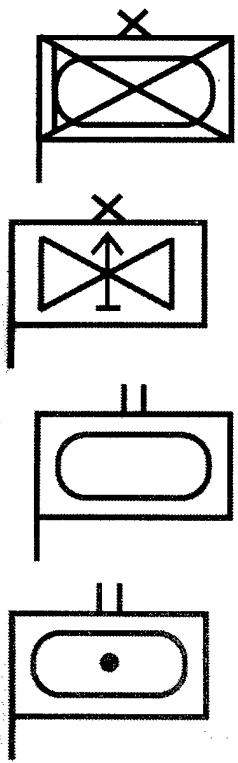
DTIC ACCESSION NUMBER 	LEVEL 	PHOTOGRAPH THIS SHEET 	INVENTORY 																												
<div style="font-size: 1.5em; font-family: cursive;">Risk Management for Brigades ...</div> <div style="font-size: 1.2em; font-family: cursive;">May 95</div> <div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> DISTRIBUTION STATEMENT A Approved for Public Release Distribution Unlimited </div>																															
DISTRIBUTION STATEMENT																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 2px;">ADDITIONAL TO:</td> </tr> <tr> <td style="padding: 2px;">NTIS</td> <td style="padding: 2px;">GRAB <input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">DTIC</td> <td style="padding: 2px;">TRAC <input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">UNANNOUNCED</td> <td style="padding: 2px;"><input type="checkbox"/></td> </tr> <tr> <td colspan="2" style="padding: 2px;">JUSTIFICATION</td> </tr> <tr><td colspan="2" style="height: 15px;"></td></tr> <tr><td colspan="2" style="height: 15px;"></td></tr> <tr><td colspan="2" style="height: 15px;"></td></tr> <tr><td colspan="2" style="height: 15px;"></td></tr> <tr> <td colspan="2" style="padding: 2px;">BY</td> </tr> <tr> <td colspan="2" style="padding: 2px;">DISTRIBUTION/</td> </tr> <tr> <td colspan="2" style="padding: 2px;">AVAILABILITY CODES</td> </tr> <tr> <td style="padding: 2px;">DISTRIBUTION</td> <td style="padding: 2px;">AVAILABILITY AND/OR SPECIAL</td> </tr> <tr> <td style="height: 40px; vertical-align: bottom; padding: 5px;">P-1</td> <td style="height: 40px;"></td> </tr> </table>	ADDITIONAL TO:		NTIS	GRAB <input checked="" type="checkbox"/>	DTIC	TRAC <input type="checkbox"/>	UNANNOUNCED	<input type="checkbox"/>	JUSTIFICATION										BY		DISTRIBUTION/		AVAILABILITY CODES		DISTRIBUTION	AVAILABILITY AND/OR SPECIAL	P-1		<div style="border: 1px solid black; height: 150px; margin-bottom: 10px;"></div> <div style="border: 1px solid black; height: 100px; margin-bottom: 10px;"></div> <div style="border: 1px solid black; height: 100px;"></div>		
ADDITIONAL TO:																															
NTIS	GRAB <input checked="" type="checkbox"/>																														
DTIC	TRAC <input type="checkbox"/>																														
UNANNOUNCED	<input type="checkbox"/>																														
JUSTIFICATION																															
BY																															
DISTRIBUTION/																															
AVAILABILITY CODES																															
DISTRIBUTION	AVAILABILITY AND/OR SPECIAL																														
P-1																															
DISTRIBUTION STAMP 		DATE RECEIVED IN DTIC 	DATE ACCESSIONED 																												
DATE RETURNED 		REGISTERED OR CERTIFIED NUMBER 																													
PHOTOGRAPH THIS SHEET AND RETURN TO DTIC-FDAC																															

HANDLE WITH CARE

20000203 127

Risk Management for Brigades and Battalions

2nd Edition



USASC Technical Report TR95-1

May 1995

TR 95-1

FOR FURTHER INFORMATION CONCERNING DISTRIBUTION CALL (703) 767-8040

PLEASE CHECK THE APPROPRIATE BLOCK BELOW:

AOR



_____ copies are being forwarded. Indicate whether Statement A, B, C, D, E, F, or X applies.



DISTRIBUTION STATEMENT A:
APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED



DISTRIBUTION STATEMENT B:
DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES
ONLY; (Indicate Reason and Date). OTHER REQUESTS FOR THIS
DOCUMENT SHALL BE REFERRED TO (Indicate Controlling DoD Office).



DISTRIBUTION STATEMENT C:
DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES AND
THEIR CONTRACTORS; (Indicate Reason and Date). OTHER REQUESTS
FOR THIS DOCUMENT SHALL BE REFERRED TO (Indicate Controlling DoD Office).



DISTRIBUTION STATEMENT D:
DISTRIBUTION AUTHORIZED TO DoD AND U.S. DoD CONTRACTORS
ONLY; (Indicate Reason and Date). OTHER REQUESTS SHALL BE REFERRED TO
(Indicate Controlling DoD Office).



DISTRIBUTION STATEMENT E:
DISTRIBUTION AUTHORIZED TO DoD COMPONENTS ONLY; (Indicate
Reason and Date). OTHER REQUESTS SHALL BE REFERRED TO (Indicate Controlling DoD Office).



DISTRIBUTION STATEMENT F:
FURTHER DISSEMINATION ONLY AS DIRECTED BY (Indicate Controlling DoD Office and Date) or HIGHER
DoD AUTHORITY.



DISTRIBUTION STATEMENT X:
DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES
AND PRIVATE INDIVIDUALS OR ENTERPRISES ELIGIBLE TO OBTAIN EXPORT-CONTROLLED
TECHNICAL DATA IN ACCORDANCE WITH DoD DIRECTIVE 5230.25 WITHHOLDING OF
UNCLASSIFIED TECHNICAL DATA FROM PUBLIC DISCLOSURE. 6 Nov 1984 (indicate date of determination).
CONTROLLING DoD OFFICE IS (Indicate Controlling DoD Office).



This document was previously forwarded to DTIC on _____ (date) and the
AD number is _____



In accordance with provisions of DoD instructions, the document requested is not supplied because:



It will be published at a later date. (Enter approximate date, if known).



Other. (Give Reason)

DoD Directive 5230.24, "Distribution Statements on Technical Documents," 18 Mar 87, contains seven distribution statements, as described briefly above. Technical Documents must be assigned distribution statements.

Cynthia Gleisberg
Authorized Signature/Date

Cynthia Gleisberg
Print or Type Name
334-8255-2924
Telephone Number

FOREWORD

This report contains tactics, techniques and procedures (TTP) for the application of risk management in training and operations at brigade and battalion levels. These TTPs were successfully field tested by units during the planning, execution and assessment phases of training at the three maneuver combat training centers.

Risk management tools referenced in this report may be obtained from local safety offices or from the Army Safety Center.

Recommended changes, comments and questions should be addressed to:
Commander, U.S. Army Safety Center, ATTN: CSSC-POR, Building 4905, 1209 5th Avenue, Fort Rucker, AL 36362.

A handwritten signature in black ink, appearing to read 'T. Garrett', with a stylized, flowing script.

THOMAS W. GARRETT
Brigadier General, USA
Director of Army Safety

TABLE OF CONTENTS

Introduction.	1
Concept	1
Risk Management Integration - Summary.	3
Risk Management Procedures - Training	3
Commander's Guidance	3
Planning Phase (Safety Assessment)	4
Execution Phase (Risk Management)	5
Assessment Phase (After Action Review).	5
Risk Management Procedures - Operations.	6
Mission Planning and Execution (Risk Management).	6
Mission Assessment (After Action Review).	8
Risk Management Responsibilities	8
Commander	8
S3 (Safety).	9
Staff (All).	9
Leaders	10
Individuals.	10

Enclosures 1-17

INTRODUCTION

This report describes a concept, with procedures and responsibilities, for risk management in brigades and battalions during Mission Essential Task List (METL) training and operations. The concept reflects the roles of safety and fratricide avoidance as elements of force protection as described in FM 100-5, Operations. The risk management procedures and responsibilities are consistent with those presented in FM 101-5, Command and Control for Commanders and Staff (Final Draft, August 1993) which is approved as interim doctrine. It should be noted that Draft FM 101-5 places staff safety responsibilities in the S3 functional area. Also, the procedures are integrated into and support phases of the training management cycle in FM 25-101, Battle Focused Training.

These procedures have been tested with three brigades and one battalion during the planning, execution and assessment phases for rotations at the National Training Center (1), Joint Readiness Training Center (2) and Combat Maneuver Training Center (1). Test brigades achieved significant reductions in ground accident casualty rates (-76%, -54%, -45%, and -64% respectively) and no aircraft accidents. Last, this report updates risk management tactics, techniques and procedures published in the Center for Army Lessons Learned Newsletter, "Force Protection (Safety)", No. 9, December 1993.

CONCEPT

Historically, the Army has suffered more losses to accidents (including fratricide) than to enemy action while deployed in combat theaters. Typically, these accidents are the same types experienced in peacetime during exercises at home station and at combat training centers (CTCs). A battle-focused training program can identify and correct the reasons for these accidents and protect the force. Effective force protection provides the commander a full measure of combat power for use at the decisive point and time.

Combat power is generated by men and machines performing battlefield operating system (BOS) functions in the operational environment. The seven BOS functions are maneuver, fire support, air defense, battle command, intelligence, mobility and survivability and combat service support. Accidents occur when performance of these functions is below standard due to human error, materiel failure or inadequate precautions for environmental factors. As in any after action review, identifying below-standard performance tells **what happened** but is only the first step to improvement. The second step is to identify the reasons **why it happened**. These reasons are found in factors that affect the ability of BOS functions to protect the force.

Army experience reveals five such factors that are sources of accidents. The first factor is **support** which functions to meet operational requirements for equipment, supplies, personnel, facilities, maintenance and services, e.g., medical. The second is **standards** which are procedures with performance criteria that exist for each task and are clear and practical. The third is **training** which provides the skills and knowledge necessary for performance to standard. The fourth is the **leader** who ensures performance to standard through guidance, teaching, oversight and enforcement. The last is the **individual** who is responsible for self-disciplined performance and conduct. Given adequate support, standards, training and leadership, the individual is expected to perform tasks to standard in operational conditions.

BOS functions that are in a below-standard status are hazards because this condition leads to human error, materiel failure and inadequate precautions for environmental factors that cause accidents. The final step to improved force protection is to identify **what to do** to control these hazards and thus reduce the risk of accidents. The Army's doctrinal process for identifying and controlling hazards is **risk management**. The process has five steps: (1) **Identify Hazards**, (2) **Assess Risk of Each Hazard**, (3) **Make Risk Decisions and Develop Controls**, (4) **Implement Controls** and (5) **Supervise**. (These steps are fully explained in Chapter 4 and Appendices F and N of FM 101-5, Final Draft, August 1993; and Chapter 3, FM 25-101).

The successful commander will use risk management first as a means of establishing and sustaining the performance of BOS functions to standard, i.e., minimizing human error, materiel failure and the effects of environmental factors. He will also use risk management as a means to continuously improve his unit's training and operational capabilities by creating new standards. To do this, he will:

1. Identify opportunities to increase training realism for current operational capabilities and identify opportunities to enhance operational capabilities.
2. Identify and assess hazards that form the safety basis for existing training and operational standards.
3. For these hazards, eliminate/substitute/modify existing controls for training and identify creative/new technology controls for operational capabilities.
4. Use these control options to create an optimal mix of the following benefits:
 - Conduct more realistic training.
 - Increase operational capability.
 - Reduce risk to the force.

RISK MANAGEMENT INTEGRATION - SUMMARY

To be most effective, risk management procedures should be integrated into existing commander processes which then become risk management tools (sample tools are listed in Enclosure 1). The objective is to help the commander improve what he is already doing. The procedures provide for:

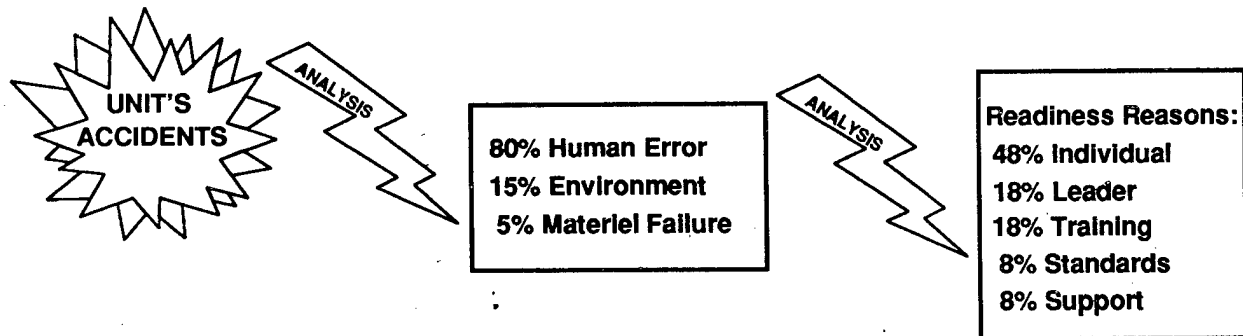
1. The development of safety policy, goals, objectives and priorities for inclusion in the commander's quarterly training guidance.
2. A safety assessment, as part of the commander's training assessment, to identify force protection shortcomings (hazards) and actions to correct or control them during the planning phase of training.
3. The systematic observation and assessment of the unit's risk management and safety performance. Objective is to provide the commander sufficient information to determine whether performance met his guidance and to identify corrective actions to feed back into the training management cycle and Standing Operating Procedures (SOP) for field and tactical operations.
4. The integration of risk management into the decision making process to identify and control hazards. Continuous application of risk management procedures for unexpected hazards.

RISK MANAGEMENT PROCEDURES - TRAINING

1. **Commander's Guidance.** To assist the Commander in developing safety policy, goals, objectives and priorities, the S3 (Safety):

a. Retrieves the unit's past (minimum of one year) accident reports (METL related only) from hard copy files or from the Army Safety Management Information System (if not available in unit, task local Safety Office for this information).

b. Analyzes the reports to determine cause factors and reasons. A summary of the most frequent Armywide factors and reasons is at Enclosure 2.



c. Prepares a report that identifies the most probable and most severe types of accidents to be expected during the upcoming planning and execution phases of training. The report should also identify the most likely reasons for these accidents and corrective control options for selection by the commander.

d. As directed, develops safety input for quarterly training guidance and for SOP.

2. Planning Phase (Safety Assessment). S3 (Safety) develops input to Commander's Training Assessment by executing the following actions:

a. **Safety Quiz.** Develop a quiz (example aviation and ground quizzes available on request from Installation Safety Office or Army Safety Center) to determine soldier knowledge of safety guidance specified by the unit (e.g., SOP) and the area of operations (e.g., home station installation or CTC). Administer the quiz to all soldiers and set a minimum passing score (e.g., 80%). Results will be rolled up from platoon to brigade level enabling commanders and leaders at each level to identify what safety guidance their soldiers do not know and to establish training to provide that knowledge. Example results are at Enclosures 3 and 4.

b. **Next Accident Assessment - Individuals** (versions tailored for aviators and ground personnel available on request from Installation Safety Office or Army Safety Center). Administer to all soldiers. Permits soldier to assess his risk of causing an accident (soldier does not reveal this result). Additional "blank-box" form requires each soldier to identify action(s) he will take to reduce his risk plus action(s) he needs chain-of-command to take. This feedback is rolled up from platoon to brigade level enabling commanders and leaders to see what their soldiers believe needs to be done to improve unit safety. Example of risk-reduction actions is at Enclosure 5.

c. **Next Accident Assessment - Leaders** (versions tailored for aviators and ground personnel available on request from Installation Safety Office or Army Safety Center). Each leader completes the assessment for each soldier he immediately rates. Assessment establishes the risk of each soldier causing an accident and the reasons for the risk. Leader enters the scores on the summary sheet and retains as a record of risk reduction progress. Summary sheets are rolled up from platoon to brigade, enabling commanders and leaders to determine the percentage of high risk soldiers, reasons for the risk and control options. Example result is at Enclosure 6.

d. **METL Risk Assessment.** Each officer and NCO estimates the accident risk for each METL task. For each task they rate as "High" or "Extremely High" they provide the reasons. This subjective assessment prioritizes the unit's METL by accident risk so controls can be focused on tasks most in need. Example result is at Enclosures 7 and 8.

e. **Safety Observations.** Observe unit's BOS functions and METL training in action. Interview commanders, key leaders and selected soldiers. Review training guidance of the unit and next higher level. Objective is to obtain information about the force protection ability of each BOS function.

f. **Analyze and record data.** Organize findings from the quiz, next accident assessments and safety observations into a report that establishes the basis for input into the Commander's Training Assessment. Example input is at Enclosure 9.

3. Execution Phase (Risk Management). During the training mission the commander and staff perform operational risk management procedures as described in the next section. The unit's risk management and safety performance is observed as follows:

a. Observer/controllers (OCs) are assigned to observe, record and report on the unit's performance. For home station exercises, OCs typically come from sister units. For CTC exercises, OCs are from the resident operations group.

b. The flow chart at Enclosure 10 may be used by OCs as a guide in observing the unit's risk management performance.

c. The form at Enclosure 11 may be used by OCs to record observed safety/fratricide incidents. At Enclosure 2 is a summary of safety factors to standardize information recorded on the observation form at Enclosure 11. The flow chart at Enclosure 12 may be used by OCs to determine the reasons for safety/fratricide incidents observed.

4. Assessment Phase (After Action Review).

a. The OCs analyze their observations and provide an assessment to the unit commander. The chart at Enclosure 13 is an example of how the risk management assessment can be presented. The chart at Enclosure 14 is an example of how the safety assessment can be presented. OCs should report any safety controls considered unnecessarily restrictive and any other opportunities to improve training realism/effectiveness.

b. The S3 (Safety) assesses how well unit performance met the commander's safety guidance and provides recommended changes to safety guidance and controls.

c. Commander uses AAR information to determine if the unit's performance met his safety guidance, the effectiveness of controls implemented during the planning and execution phases and ensures that necessary changes are fed back into the training management cycle and SOP.

RISK MANAGEMENT PROCEDURES - OPERATIONS

1. Mission Planning and Execution (Risk Management). During planning and execution of the mission, commander and staff use risk management procedures to identify and control mission, enemy, terrain/weather, troop and time (METT-T) hazards. The chart at Enclosure 15 shows how risk management can be integrated into the decision making process. Both of these processes require sequential steps that are executed based on time available. When time is limited the steps are streamlined with increased reliance on the experience and expertise of the commander and staff. The table at Enclosure 16 shows how risk management can be integrated into a related mission training plan task.

MISSION

A mechanized infantry battalion task force received a mission to deploy into a Zone of Separation established by the UN to execute Peace Keeping operations. The deployment required execution of a tactical road march with a ROM (refuel on the move).

a. Risk assessment. The S3 (Safety) gathers METT-T information from the staff and completes a risk assessment for each course of action (COA). Risk assessment matrices tailored for the unit's METL may be used for this purpose. The risk level of each COA should be entered on the decision matrix as the Force Protection (Safety and Fratricide Avoidance) criterion.

RISK ASSESSMENT

The battalion had recently completed training for ROM using organic assets. The brigade assumed responsibility for establishing the ROM and published the procedures as part of the brigade OPORD. The S3 (Safety) pointed out the battalion had never rehearsed a ROM using the technique designated by the brigade. There was no time available for the battalion to retrain and rehearse the new ROM technique prior to the start of movement for the deployment.

After analyzing this mission using the unit's risk management matrix, S3 (Safety) determined the risk level was extremely high. The risk resulted from attempting to move large numbers of heavy tracked and wheeled vehicles through an unrehearsed ROM on poor roads during inclement weather and would likely result in an accident.

b. Risk management. Commander selects the COA and decides to accept the level of risk or elevate the decision to the next command level. Decision is based on the level of risk-acceptance authority delegated by higher command and significant hazards that cannot be controlled at his command level (NOTE: Each organization is responsible for establishing the level of command with the authority to accept each level of risk.). For the selected COA, each staff officer applies risk management procedures for his BOS function to identify the hazards most likely to result in loss of combat power and implements one or more controls for each. Care is taken to avoid unnecessary safety restrictions. The Executive Officer (XO) reviews control options developed by the staff that have cross-function implications. He ensures synchronization of the total risk control effort.

Control options addressing high risk hazards and/or those having a potentially significant impact on the COA are recommended by the XO to the commander for his decision.

Approved controls are developed by the staff and integrated into appropriate paragraphs of the operation order and overlays. Commander and staff then monitor and enforce controls until mission completion. New or increased risk in METT-T hazards are risk managed as they occur during the mission. The table at Enclosure 17 shows how risk management can be integrated into an OPOD.

RISK MANAGEMENT

The preferred control option identified by the battalion staff during COA development, rehearse the new ROM technique before execution, was not possible. Time was not available to organize and execute an additional rehearsal.

The battalion commander knew he did not have the authority to change the brigade's OPOD. He also did not have the authority to implement the second control option recommended by his XO which was to execute the ROM as previously trained and rehearsed. He elevated the risk decision and his recommended control to the brigade commander for decision.

The brigade and battalion commanders discussed the hazard and the control option. The brigade commander agreed that the risks outweighed the potential benefits and directed the OPOD be changed to allow the battalion to execute the ROM to the trained standard.

In this organization, authority to accept high/extremely high risk resides at the command level that assigned the mission. In this case, the brigade had assigned the mission, therefore the brigade commander was the appropriate level for accepting the risk.

The OPORD was changed and the battalion executed the ROM as rehearsed. Supervision was simplified because duties and procedures were clearly communicated and well understood throughout the chain of command. The ROM was executed without incident and the change of control from brigade to battalion did not adversely affect the mission.

2. Mission Assessment (After Action Review). After mission completion, commander and staff assess the unit's risk management effectiveness and force protection (safety/fratricide) performance. Improvements are identified and actions to implement are initiated.

a. For his BOS function, each staff officer assesses the effectiveness of each risk management step, the reasons (force protection factors) for incidents experienced during the mission and whether or not the commander's guidance was met. Based on this assessment, each staff officer identifies (and initiates action to implement) improvements needed.

b. The S3 (Safety) collects from the staff information about force protection shortcomings and needed improvements. He identifies those considered significant/having cross-function application and reports them to the XO. The XO reviews these shortcomings and needed improvements, takes action to implement those he deems necessary and elevates to the commander only those having significant mission impact/high accident risk.

c. The commander uses information from the AAR and recommendations from the XO/staff to determine if the unit's risk management and safety performance met his guidance, the effectiveness of hazard controls implemented, and necessary changes to guidance and controls (including SOP) for future missions.

RISK MANAGEMENT RESPONSIBILITIES

1. Commander.

a. Ensure ability of BOS functions to perform to standard in order to minimize human error, materiel failure and environmental effects.

b. Establish force protection policy and realistic safety goals, each with objectives and priorities.

c. Ensure commander's training assessment considers ability of BOS functions to protect the force. Collect and ensure implementation of long term, short term and near term control actions to improve force protection.

d. Ensure staff integrates risk management into the planning and execution of training and operational missions.

e. Make risk decision. Select, monitor and enforce implementation of controls for hazards most likely to result in loss of combat power. After implementing controls, if risk is still above authority to accept, elevate risk decision to the appropriate command level.

f. Determine if unit performance met force protection guidance. Determine effectiveness of hazard controls and necessary changes to guidance and controls. Ensure these changes are fed back into the training management cycle and guidance for operational missions, including unit's SOP.

2. **S3 (Safety)**. For the purposes of this paper, the officer designated by the commander as responsible for the force protection components of safety and fratricide avoidance is identified as the S3 (Safety). (NOTE: Analysis of S3 (Safety) tasks outlined in this report for Brigades and Battalions support placement in the S3 functional area. This placement is reflected in FM 101-5, Final Draft, August 1993).

a. Monitor ability of each BOS to protect the force. Advise commander when below-standard status (affecting force protection) of any BOS is detected.

b. Develop input for commander's force protection policy and goals with objectives and priorities.

c. Develop force protection input for quarterly training guidance and SOP.

d. Develop safety input options for commander's training assessment.

e. Complete risk assessment for each course of action (COA) during operational missions.

f. Assess unit risk management and force protection performance during training and operations. Provide recommended changes to force protection guidance and controls.

3. **Staff (All)**.

a. Execute functions to provide:

(1) Support needed to meet operational requirements.

(2) Procedures and standards that are clear and practical for each METL task.

(3) Training necessary for METL performance to standard.

b. Identify force protection shortcomings in BOS functions and develop control actions.

c. Apply risk management procedures. Develop and implement controls selected by the commander.

4. Leaders.

a. Enforce METL task performance to standard. Adopt the "Crawl-Walk-Run" approach in planning and executing training.

b. Administer the Safety Quiz. Use results to establish and execute training to provide needed force protection knowledge and skills.

c. Complete Next Accident Assessment for each soldier rated. Use results to provide counselling and training needed to reduce each soldier's risk.

d. Execute risk reduction controls selected by commander by developing and implementing supporting leader-level controls. Apply risk management procedures in executing each METL task. After implementing controls, if risk is still above leader authority to accept, elevate risk decision to the appropriate command level.

5. Individuals.

a. Sustain self-disciplined duty performance and conduct.

b. Execute risk management controls selected by the commander and leader.

c. Complete the Next Accident Assessment for Individuals. Identify control actions for risk factors revealed by the assessment. Execute those within personal capability. Request chain-of-command assistance with those above personal authority/capability.

d. Use risk management procedures in executing METL tasks.

RISK MANAGEMENT TOOLS THAT CAN IDENTIFY SHORTCOMINGS IN FORCE PROTECTION

FORCE PROTECTION FACTORS

TOOLS	Support	Standards	Training	Leader	Individual
Unit Accident Analysis	X	X	X	X	X
Commander's Training Assessment	X		X	X	
Army Training Evaluation Plan			X		
Mission Training Plan		X			
Mission Readiness Report (USR) { Equipment Training Personnel Overall	X X X		X X		
Next Accident Assessment	X	X	X	X	X
Safety Readiness Quiz			X		
METL Risk Assessment	X	X	X	X	X
Observation and After Action Review	X	X	X	X	X
Mission Risk Management	X		X	X	

COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Ground Operations (Cont'd)		INDIVIDUAL	LDR	TNG	SUPPORT
MATERIEL HANDLING					
Improper Technique		X	X	X	
Unsecured/Unstable Load		X		X	
Environmental Hazard			X		X
Getting On/Off Vehicle		X			
Equipment Usage			X		
Other (Specify)					
COMBAT SOLDIERING					
Tactical Parachuting - Improper Exit					
- Improper Descent					
- Improper PLF					
Traversing Terrain Under Adverse Env Conditions					
Cannouffloading:					
- Removing/Emplacing Net (Entrapments/Falls)					
- Failing to Maintain 3 Points of Contact on Veh					
Other (Specify)					
OTHER (SPECIFY)					
COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Aviation Operations		INDIVIDUAL	LDR	TNG	SUPPORT
Scan		X	X	X	X
Coordinate		X		X	
Detect Hazards/Obstacles			X		
Maintain/Recover Orientation		X			
Plan - Preflight		X			
Plan - During Flight		X			
Diagnose/Respond to Emergency					
Estimate Distance/Closure					
Other (Specify)					
REASONS					
INDIVIDUAL (48%) - SOLDIER KNOWS AND IS TRAINED TO STANDARD BUT ELECTS NOT TO FOLLOW STANDARD (SELF DISCIPLINE).					
- ATTITUDE - OVERCONFIDENCE - ALCOHOL, DRUGS - HASTE					
LEADER (18%) - LEADER DOES NOT ENFORCE KNOWN STANDARD					
- DIRECT SUPERVISION - UNIT COMMAND SUPERVISION - HIGHER COMMAND SUPERVISION					
TRAINING (18%) - SOLDIER NOT TRAINED TO KNOWN STANDARD (INSUFFICIENT, INCORRECT OR NO TRAINING ON TASK).					
- SCHOOL - UNIT - EXPERIENCE, QJT					
STANDARDS (6%) - STANDARDS/PROCEDURES NOT CLEAR OR PRACTICAL, OR DO NOT EXIST.					
- TASK - CONDITION - STANDARD					
- OPERATING PROCEDURES (AR, TM, FM, SOP, ETC.)					
SUPPORT (8%) - EQUIPMENT/MATERIEL IMPROPERLY DESIGNED/NOT PROVIDED; INSUFFICIENT NUMBER/TYPE OF PERSONNEL; INADEQUATE MAINTENANCE/FACILITIES/SERVICES					

COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Ground Operations		INDIVIDUAL	LDR	TNG	SUPPORT
WHEELED VEHICLE					
Excessive Speed		X	X	X	
Unsafe Road Conditions		X		X	X
Night/Excessive Duty Hours		X		X	
Improper Turning		X		X	
Unsafe Mechanical Condition			X		X
Improper Passing		X	X	X	
Following too Close		X		X	
Mounting/Dismounting Vehicle		X			
Other (Specify)					
TRACKED VEHICLE					
B-D-A Operations Checks		X	X		X
Rough Terrain		X		X	
Excessive Speed		X	X	X	
Darkness/Fatigue		X	X	X	
Improper Ground Guiding		X	X	X	
Cross Coordination/Comm		X		X	X
Mounting/Dismounting Vehicle		X			
Other (Specify)					
WEAPONS HANDLING					
Sighting/Aiming/Firing/Throwing		X	X	X	X
Unauthorized Use/Handling (Duds)		X	X	X	
Carrying/Lifting/Transporting		X		X	
Disarming/Unloading (Improper clearing)		X		X	
Ready Positioning		X		X	
Loading/Arming		X		X	
Emplacing		X		X	
Assembling/Cleaning/Dismantling (Improper during)		X		X	
Other (Specify)					
MAINTENANCE					
Improper Use of Tools/Equipment		X	X	X	X
Improper Lifting		X		X	
Improper Body Position		X		X	
Improperly Secured Materiel/Equip/Veh		X	X		
Improper Push/Pull/Grip/Hold		X		X	
Inadequate Inspection (Components, Equip/Area)				X	
Other (Specify)					

COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Ground Operations		INDIVIDUAL	LDR	TNG	SUPPORT
WHEELED VEHICLE					
Excessive Speed		X	X	X	
Unsafe Road Conditions		X		X	X
Night/Excessive Duty Hours		X		X	
Improper Turning		X		X	
Unsafe Mechanical Condition			X		X
Improper Passing		X	X	X	
Following too Close		X		X	
Mounting/Dismounting Vehicle		X			
Other (Specify)					
TRACKED VEHICLE					
B-D-A Operations Checks		X	X		X
Rough Terrain		X		X	
Excessive Speed		X	X	X	
Darkness/Fatigue		X	X	X	
Improper Ground Guiding		X	X	X	
Cross Coordination/Comm		X		X	X
Mounting/Dismounting Vehicle		X			
Other (Specify)					
WEAPONS HANDLING					
Sighting/Aiming/Firing/Throwing		X	X	X	X
Unauthorized Use/Handling (Duds)		X	X	X	
Carrying/Lifting/Transporting		X		X	
Disarming/Unloading (Improper clearing)		X		X	
Ready Positioning		X		X	
Loading/Arming		X		X	
Emplacing		X		X	
Assembling/Cleaning/Dismantling (Improper during)		X		X	
Other (Specify)					
MAINTENANCE					
Improper Use of Tools/Equipment		X	X	X	X
Improper Lifting		X		X	
Improper Body Position		X		X	
Improperly Secured Materiel/Equip/Veh		X	X		
Improper Push/Pull/Grip/Hold		X		X	
Inadequate Inspection (Components, Equip/Area)				X	
Other (Specify)					

COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Ground Operations		INDIVIDUAL	LDR	TNG	SUPPORT
WHEELED VEHICLE					
Excessive Speed		X	X	X	
Unsafe Road Conditions		X		X	X
Night/Excessive Duty Hours		X		X	
Improper Turning		X		X	
Unsafe Mechanical Condition			X		X
Improper Passing		X	X	X	
Following too Close		X		X	
Mounting/Dismounting Vehicle		X			
Other (Specify)					
TRACKED VEHICLE					
B-D-A Operations Checks		X	X		X
Rough Terrain		X		X	
Excessive Speed		X	X	X	
Darkness/Fatigue		X	X	X	
Improper Ground Guiding		X	X	X	
Cross Coordination/Comm		X		X	X
Mounting/Dismounting Vehicle		X			
Other (Specify)					
WEAPONS HANDLING					
Sighting/Aiming/Firing/Throwing		X	X	X	X
Unauthorized Use/Handling (Duds)		X	X	X	
Carrying/Lifting/Transporting		X		X	
Disarming/Unloading (Improper clearing)		X		X	
Ready Positioning		X		X	
Loading/Arming		X		X	
Emplacing		X		X	
Assembling/Cleaning/Dismantling (Improper during)		X		X	
Other (Specify)					
MAINTENANCE					
Improper Use of Tools/Equipment		X	X	X	X
Improper Lifting		X		X	
Improper Body Position		X		X	
Improperly Secured Materiel/Equip/Veh		X	X		
Improper Push/Pull/Grip/Hold		X		X	
Inadequate Inspection (Components, Equip/Area)				X	
Other (Specify)					

COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Ground Operations		INDIVIDUAL	LDR	TNG	SUPPORT
WHEELED VEHICLE					
Excessive Speed		X	X	X	
Unsafe Road Conditions		X		X	X
Night/Excessive Duty Hours		X		X	
Improper Turning		X		X	
Unsafe Mechanical Condition			X		X
Improper Passing		X	X	X	
Following too Close		X		X	
Mounting/Dismounting Vehicle		X			
Other (Specify)					
TRACKED VEHICLE					
B-D-A Operations Checks		X	X		X
Rough Terrain		X		X	
Excessive Speed		X	X	X	
Darkness/Fatigue		X	X	X	
Improper Ground Guiding		X	X	X	
Cross Coordination/Comm		X		X	X
Mounting/Dismounting Vehicle		X			
Other (Specify)					
WEAPONS HANDLING					
Sighting/Aiming/Firing/Throwing		X	X	X	X
Unauthorized Use/Handling (Duds)		X	X	X	
Carrying/Lifting/Transporting		X		X	
Disarming/Unloading (Improper clearing)		X		X	
Ready Positioning		X		X	
Loading/Arming		X		X	
Emplacing		X		X	
Assembling/Cleaning/Dismantling (Improper during)		X		X	
Other (Specify)					
MAINTENANCE					
Improper Use of Tools/Equipment		X	X	X	X
Improper Lifting		X		X	
Improper Body Position		X		X	
Improperly Secured Materiel/Equip/Veh		X	X		
Improper Push/Pull/Grip/Hold		X		X	
Inadequate Inspection (Components, Equip/Area)				X	
Other (Specify)					

COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Ground Operations		INDIVIDUAL	LDR	TNG	SUPPORT
WHEELED VEHICLE					
Excessive Speed		X	X	X	
Unsafe Road Conditions		X		X	X
Night/Excessive Duty Hours		X		X	
Improper Turning		X		X	
Unsafe Mechanical Condition			X		X
Improper Passing		X	X	X	
Following too Close		X		X	
Mounting/Dismounting Vehicle		X			
Other (Specify)					
TRACKED VEHICLE					
B-D-A Operations Checks		X	X		X
Rough Terrain		X		X	
Excessive Speed		X	X	X	
Darkness/Fatigue		X	X	X	
Improper Ground Guiding		X	X	X	
Cross Coordination/Comm		X		X	X
Mounting/Dismounting Vehicle		X			
Other (Specify)					
WEAPONS HANDLING					
Sighting/Aiming/Firing/Throwing		X	X	X	X
Unauthorized Use/Handling (Duds)		X	X	X	
Carrying/Lifting/Transporting		X		X	
Disarming/Unloading (Improper clearing)		X		X	
Ready Positioning		X		X	
Loading/Arming		X		X	
Emplacing		X		X	
Assembling/Cleaning/Dismantling (Improper during)		X		X	
Other (Specify)					
MAINTENANCE					
Improper Use of Tools/Equipment		X	X	X	X
Improper Lifting		X		X	
Improper Body Position		X		X	
Improperly Secured Materiel/Equip/Veh		X	X		
Improper Push/Pull/Grip/Hold		X		X	
Inadequate Inspection (Components, Equip/Area)				X	
Other (Specify)					

COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Ground Operations		INDIVIDUAL	LDR	TNG	SUPPORT
WHEELED VEHICLE					
Excessive Speed		X	X	X	
Unsafe Road Conditions		X		X	X
Night/Excessive Duty Hours		X		X	
Improper Turning		X		X	
Unsafe Mechanical Condition			X		X
Improper Passing		X	X	X	
Following too Close		X		X	
Mounting/Dismounting Vehicle		X			
Other (Specify)					
TRACKED VEHICLE					
B-D-A Operations Checks		X	X		X
Rough Terrain		X		X	
Excessive Speed		X	X	X	
Darkness/Fatigue		X	X	X	
Improper Ground Guiding		X	X	X	
Cross Coordination/Comm		X		X	X
Mounting/Dismounting Vehicle		X			
Other (Specify)					
WEAPONS HANDLING					
Sighting/Aiming/Firing/Throwing		X	X	X	X
Unauthorized Use/Handling (Duds)		X	X	X	
Carrying/Lifting/Transporting		X		X	
Disarming/Unloading (Improper clearing)		X		X	
Ready Positioning		X		X	
Loading/Arming		X		X	
Emplacing		X		X	
Assembling/Cleaning/Dismantling (Improper during)		X		X	
Other (Specify)					
MAINTENANCE					
Improper Use of Tools/Equipment		X	X	X	X
Improper Lifting		X		X	
Improper Body Position		X		X	
Improperly Secured Materiel/Equip/Veh		X	X		
Improper Push/Pull/Grip/Hold		X		X	
Inadequate Inspection (Components, Equip/Area)				X	
Other (Specify)					

COMMON REASONS		COMMON REASONS			
HUMAN ERROR - Ground Operations		INDIVIDUAL	LDR	TNG	SUPPORT
WHEELED VEHICLE					
Excessive Speed		X	X	X	
Unsafe Road Conditions		X		X	X
Night/Excessive Duty Hours		X			

GROUND SAFETY QUIZ

- TOP 10 QUESTIONS MISSED -

Q#	TOPIC	MISSED
22	HEATER/STOVE OPNS – TENT STOVE	96% (45)
49	ENVIRONMENT – RABIES	87% (41)
36	VEH OPNS – FOLLOWING DISTANCE	83% (39)
10	WPNS HANDLING – SMALL ARMS	77% (36)
50	ENVIRONMENT – LIGHTNING	77% (36)
35	VEHICLE OPNS – SPEED LIMITS	72% (34)
47	TRANSPORTING AMMUNITION	72% (34)
25	COLD INJURY – ACCLIMITIZATION	64% (30)
20	HEATER OPNS – HEATER FUEL	60% (28)
7	RISK MGMT – HAZARD ASSESSMENT	57% (27)
2	HUMAN ERROR ACCIDENTS	51% (24)
39	VEH OPNS – TRACK VEH & TROOPS	45% (21)

SCORE SUMMARY

BEST 86% (1 SOLDIER)

AVE 71% (47 SOLDIERS COMPLETED QUIZ)

WORST 40% (1 SOLDIER)

AVIATION SAFETY QUIZ

- TOP 10 QUESTIONS MISSED -

Q#	TOPIC	MISSED
25	POSITIVE COMMUNICATION	54%
1	AVIATION ACCIDENT LOSSES – WARTIME	50%
8	INADVERTENT IMC	50%
9	PERFORMANCE PLANNING UPDATE – REQTS	45%
5	PROBLEM RELATED TO IMC	37%
40	NIGHT AIDED CREW ERROR ACCIDENTS	37%
45	IR –BAND PASS FILTER – REQTS	37%
37	FACTORS IN 'FAILURE TO DETECT' – ACCIDENTS	33%
46	BROWN OUT	29%
3	READINESS DEFICIENCIES – ACCIDENTS	25%
6	FLIGHT OVER FLAT TERRAIN	25%

SCORE SUMMARY

BEST	96% (1 SOLDIER)
AVE	86% (24 SOLDIERS COMPLETED QUIZ)
WORST	76% (1 SOLDIER)

**Typical Soldier Response To:
"Actions I Will Take to Reduce My Accident Risk"**

- Thoroughly plan and supervise all vehicle movements.
- Infuse risk management considerations and controls into all battalion staff planning and orders.
- Conduct PCI of all personnel and equipment.
- Conduct additional leader training for LOGPAC and ROM operations.
- Establish internal soldier and leader rest plans.
- Protect "MILES casualties" from unnecessary exposure to cold weather injuries during the evacuation process.
- Provide hazard identification, assessment and control recommendations for each operation at the shift change briefings.
- Put soldier safety considerations into every mission.
- Make on-the-spot corrections and enforce safety standards.
- Identify high risk soldiers and monitor their performance.
- Conduct mission risk assessments and establish controls or ask for help.
- Learn and enforce all safety standards and provide supervision.
- Cross-train all crews.
- Increase emphasis on Night Vision Device training and driving.
- Focus on each task.
- Drink plenty of water, eat well and get as much rest as possible.
- Pay attention to the environment and wear cold weather gear correctly.
- Brief soldiers on the mission hazards and controls.
- Use buddy teams.
- Think before acting and not be impatient.
- Fix or report problems to the chain-of-command.
- Stay alert for hazardous conditions.
- Follow appropriate speed for the conditions.

"Chain-of-Command Action(s) Needed to Reduce My Accident Risk"

- Schedule and de-conflict problems at washracks and motorparks.
- Provide clear, consistent and timely mission guidance.
- Develop and enforce key leader, TOC and staff rest plans.
- Provide time and resources to plan and execute missions.
- Conduct new driver training.
- Conduct additional leader training on risk management.
- Incorporate safety considerations into all plans and orders.
- Provide adequate reaction time to changes in plans.
- Allow NCO support chain to enforce safety standards.
- Provide adequate time to rehearse complex missions.
- Provide more local training area time with equipment to practice maneuver tasks.
- Provide clear guidance on safety standards and enforce them.
- Provide reverse cycle training opportunities to improve night fighting skills.
- Stabilize crew personnel for CTC rotations.
- Provide the required tools to complete maintenance.

- Keep plans simple.
- Ensure soldiers receive adequate water, food and rest during CTC rotations.
- Improve communication and coordination in the unit.
- Publish SOP.
- Conduct frequent AARs to discuss lessons learned.
- Inform soldiers of weather and hazards prior to each mission.
- Supervise safety by appointing exceptional safety officers/NCOs.
- Explain "Why" missions are important.
- Spread hard missions between all units.
- Protect soldiers from frostbite.

ACCIDENT RISK ASSESSMENT OF PERSONNEL RATED BY COMMANDERS/LEADERS

RISK FACTORS (FROM NEXT ACCIDENT ASSESSMENT)		POINTS	PERCENT OF PERSONNEL
1. Self discipline (dependability)			
a. Counseled for poor performance	8	18%	
b. Had at fault accidents/citations	8	8	
c. Abused alcohol/drugs	8	4	
d. Had judicial/non-judicial punishment	8	7	
e. GT score of 90 or less	8	4	
f. Males under age 25	8	53	
2. Leadership (enforcement of standards)			
a. Insufficient knowledge/experience	6	29	
b. Tolerates below-standard performance	12	21	
3. Training (job skills and knowledge)			
a. MOS SDT (SQT) score less than 70	9	5	
b. Not proficient in assigned tasks outside MOS	9	10	
4. Standards (task-cond-std/procedure)			
a. Do not exist	4	8	
b. Not clear/practical	4	13	
5. Support (insuff amount/type/condition)			
a. Equipment	2	13	
b. Supplies	2	14	
c. Services/facilities	2	18	
d. Personnel	2	27	

• 91 Soldiers were assessed by 19 Commanders/Leaders

• Assessment results were:

RISK LEVEL **PERCENT OF SOLDIERS**

Extremely High 2%

High 11%

Medium 15%

Low 71%

• Indicators/sources of accident risk as reported are shown at left.

ASSESSMENT OF ACCIDENT RISK FOR METL

RISK RANK OF METL	NUMBER OF PERSONNEL	RISK OF HAVING ACCIDENT			
		LOW 1	MED 2	HI 3	EXT HI
1. TRANSITION TO MISSION	20	1.50			
2. DEPLOY/REDEPLOY	20	2.25			
3. PERFORM TACTICAL ROAD MARCH	20	1.65			
4. FIGHT MEETING ENGAGEMENT	20	2.20			
5. ATTACK	20	2.30			
6. DEFEND	16	1.56			
7. PEACEKEEPING/PEACE ENFORCEMENT	20	2.05			

REASONS FOR ACCIDENT RISK IN METL TASKS

1. TRANSITION TO MISSION - MEDIUM RISK
 - first mission
 - many inexperienced/untrained crews
2. DEPLOY/REDEPLOY - HIGH RISK
 - first and last mission
 - fatigue and many hours of driving
 - 100+ vehicles in convoy, 80+ vehicles by rail
 - German roads in adverse weather
 - new crews and leaders (rail loading experience)
 - too many distractors
3. PERFORM TACTICAL ROAD MARCH - MEDIUM RISK
 - tired soldiers anticipating next mission
 - German roads in adverse weather
4. FIGHT MEETING ENGAGEMENT - HIGH RISK
 - maneuver in highly fluid environment
 - untrained/inexperienced personnel
 - all new drivers, little time in vehicles practicing maneuvers
 - minimal training between crews and squads
 - too many distractors
 - new soldiers not trained to fight as a crew
5. ATTACK - HIGH RISK
 - moving fast
 - night/early morning, little sleep, late in rotation
 - untrained/inexperienced personnel
 - new drivers in all vehicles, little time in vehicles practicing maneuvers
 - handling of demolitions, increased use of heavy equipment
6. DEFEND - MEDIUM RISK
 - long hours with little rest
 - untrained personnel
7. PEACEKEEPING/ENFORCEMENT- HIGH RISK
 - new mission (confusion)
 - civilians on battlefield around vehicles
 - decentralized operations (platoons and squads on their own)
 - sleep deprivation
 - new soldiers not task trained
 - route clearing, mines, etc. (Cbt Eng)
 - soldier discipline

FORCE PROTECTION READINESS ASSESSMENT OF BATTLEFIELD OPERATING SYSTEM (BOS) FUNCTIONS

ACCIDENT RISK CONTROL OPTIONS

- HAVE NCOs DEVELOP AND IMPLEMENT A COMPLETE BRIGADE-LEVEL SAFETY TRAINING PROGRAM (CSS-LT & C&C-T,L)

- ADD SAFETY CRITERIA TO THE LEADER CERTIFICATION PROGRAM AT BATTALION AND COMPANY LEVELS (CSS-LT & C&C-LT)

- COUNTER SHORTAGE OF PVS-7 NVGs BY REDISTRIBUTING FROM SISTER UNITS FOR TRAINING AND USE IN FTX NIGHT MISSIONS (CSS-T, S)

- **INITIATE DEVELOPMENTAL/SUSTAINMENT PERFORMANCE-ORIENTED TRAINING (SAFETY STAKES) FOR GUIDANCE IN NTC RULES OF ENGAGEMENT AND INSTALLATION'S TACTICAL SAFETY HANDBOOK. (CSS-T & C&C-T,L)**

● **FTXs - IN ADDITION TO NORMAL DUTIES, REQUEST CONTROLLERS/TRAINERS FOCUS SAFETY ON-SPOT CORRECTIONS AND AAR OBSERVATIONS ON THE FOLLOWING ACCIDENT PROBLEM AREAS: WHEEL-EXCESSIVE SPEED & FOLLOWING TOO CLOSE; TRACK-BEFORE/DURING/AFTER OPERATION CHECKS, ROUGH TERRAIN PRECAUTIONS (SEAT BELTS & EQUIPMENT SECURED) & IMPROPER GROUND GUIDING. (CSS-1, L)**

LEGEND - BOS FUNCTION READY TO EXECUTE TRAINING (R)

- BOS FUNCTION NOT READY DUE TO SHORTCOMINGS IN: TRAINING (T), LEADERSHIP (L), STANDARDS/PROCEDURES (P), SUPPORT (S), OR SELF DISCIPLINE OF INDIVIDUALS (I)
- ACCIDENT RISK: EXTREMELY HIGH (E), HIGH (H), MEDIUM (M), LOW (L)

RISK MANAGEMENT ASSESSMENT

BEFORE THE MISSION

1. ASSESSMENT ACCOMPLISHED?

WAS A SAFETY RISK ASSESSMENT ACCOMPLISHED AT TF/BN LEVEL?

NO

YES

REPORT FINDING TO
TF/BDE CDRI

2. HAZARDS IDENTIFIED?

WERE THE "MOST PROBABLE" HAZARDS IDENTIFIED FOR EACH TYPE OF OPERATION (E.G., WHEELED VEH, TRACKED VEH, ETC)?

NO/
IMPROVE

YES/
SUSTAIN

3. PROBABILITY ASSESSED?

WAS PROBABILITY OF EACH HAZARD'S OCCURRENCE/SEVERITY APPROPRIATELY ASSESSED?

NO/
IMPROVE

YES/
SUSTAIN

4. CONTROL OPTIONS IDENTIFIED?

WERE CONTROL OPTIONS IDENTIFIED TO ELIMINATE/REDUCE HAZARDS IDENTIFIED?

NO/
IMPROVE

YES/
SUSTAIN

5. DECISION LEVEL?

WAS DECISION TO ACCEPT MISSION RISK MADE AT APPROPRIATE COMMAND LEVEL?

NO/
IMPROVE

YES/
SUSTAIN

6. CONTROLS COMMUNICATED?

WERE IDENTIFIED HAZARDS AND CONTROLS CLEARLY COMMUNICATED TO ALL PERSONNEL, ESPECIALLY THOSE RESPONSIBLE FOR IMPLEMENTING CONTROLS, E.G., CO/PLT LEADERS?

NO/
IMPROVE

YES/
SUSTAIN

DURING THE MISSION

7. CONTROLS IMPLEMENTED?

WERE IDENTIFIED CONTROLS APPROPRIATELY IMPLEMENTED & ENFORCED AT CO/PLT LEVEL?

NO/
IMPROVE

YES/
SUSTAIN

AFTER THE MISSION

8. RISK MGMT EFFECTIVE?

WAS RISK MGMT PROCESS EFFECTIVE IN IDENTIFYING AND CONTROLLING HAZARDS ACTUALLY EXPERIENCED DURING MISSION?

NO/
IMPROVE

YES/
SUSTAIN

(WHICH STEP(S) TURNED OUT TO BE INEFFECTIVELY EXECUTED?)

Encl 10

FORCE PROTECTION (SAFETY) OBSERVATION

CALL SIGN Werewolves

1. UNIT B - 3/29 DTG 071930 Apr 93

2. TYPE OPERATION (CHECK ONE)

WHEELED VEHICLE	<u> </u>	MATERIEL HANDLING	<u> </u>
TRACKED VEHICLE	<u> X </u>	COMBAT SOLDIERING	<u> </u>
WEAPONS HANDLING	<u> </u>	AVIATION OPS	<u> </u>
MAINTENANCE	<u> </u>	OTHER	<u> </u>

3. PROBLEM AREA (SEE LIST)

- Operation/precautions for rough terrain

Two soldiers, one standing and the other kneeling on top of M548 ammunition carrier while the vehicle was moving forward/

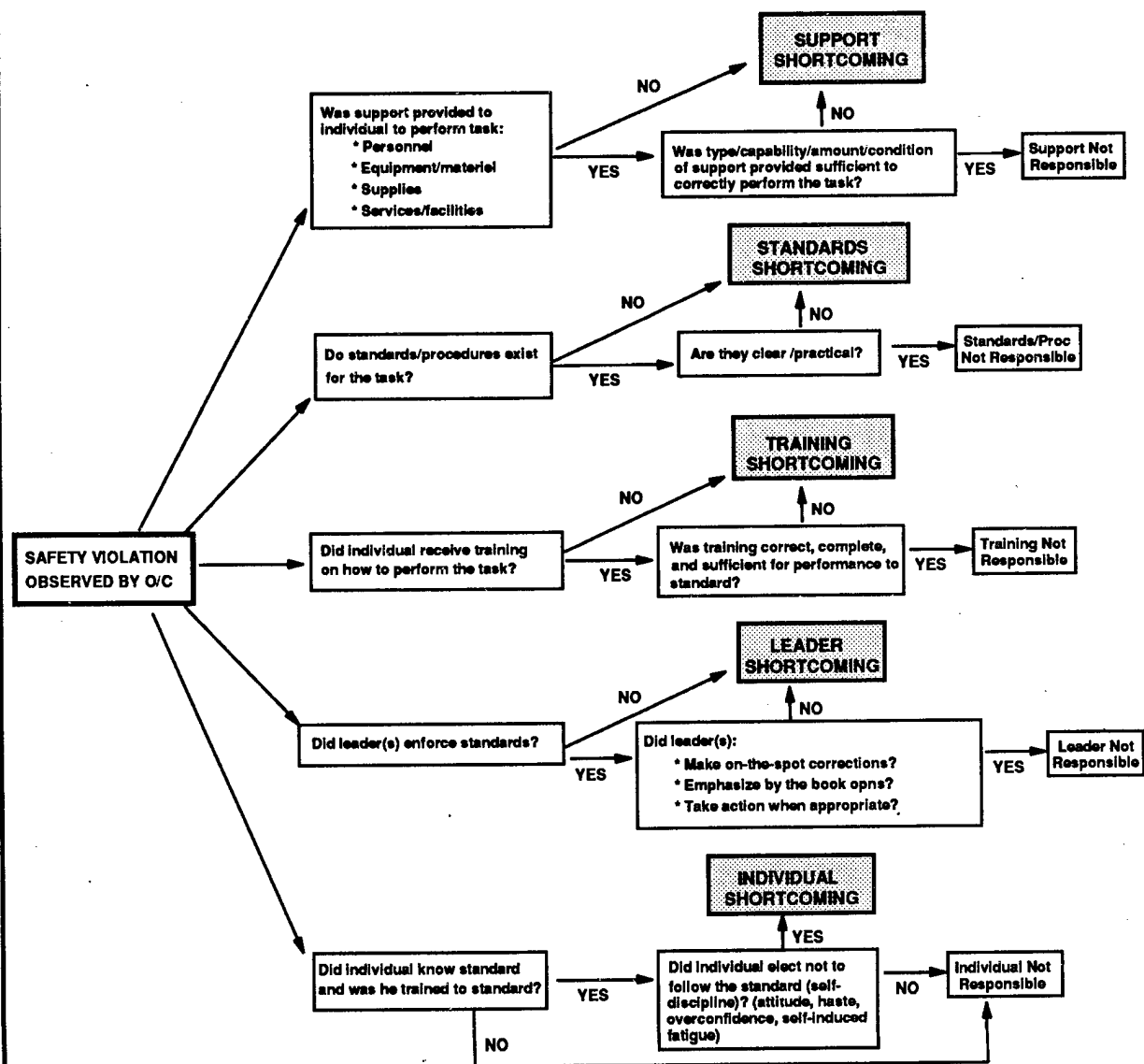
[Ref: NTC ROE - Tracked Vehicle Operations, Crew and Passenger Protection]

4. FORCE PROTECTION SHORTCOMING(S) - (CHECK ONE OR MORE)

INDIVIDUAL	<u> X </u>	STANDARDS	<u> </u>
LEADER	<u> X </u>	SUPPORT	<u> </u>
TRAINING	<u> </u>		<u> </u>

5. CONTROLS COMMUNICATED?	YES <u> X </u>	NO <u> </u>
6. CONTROLS IMPLEMENTED?	YES <u> </u>	NO <u> X </u>

DETERMINING FORCE PROTECTION SHORTCOMING(S) RESPONSIBLE FOR SAFETY VIOLATIONS



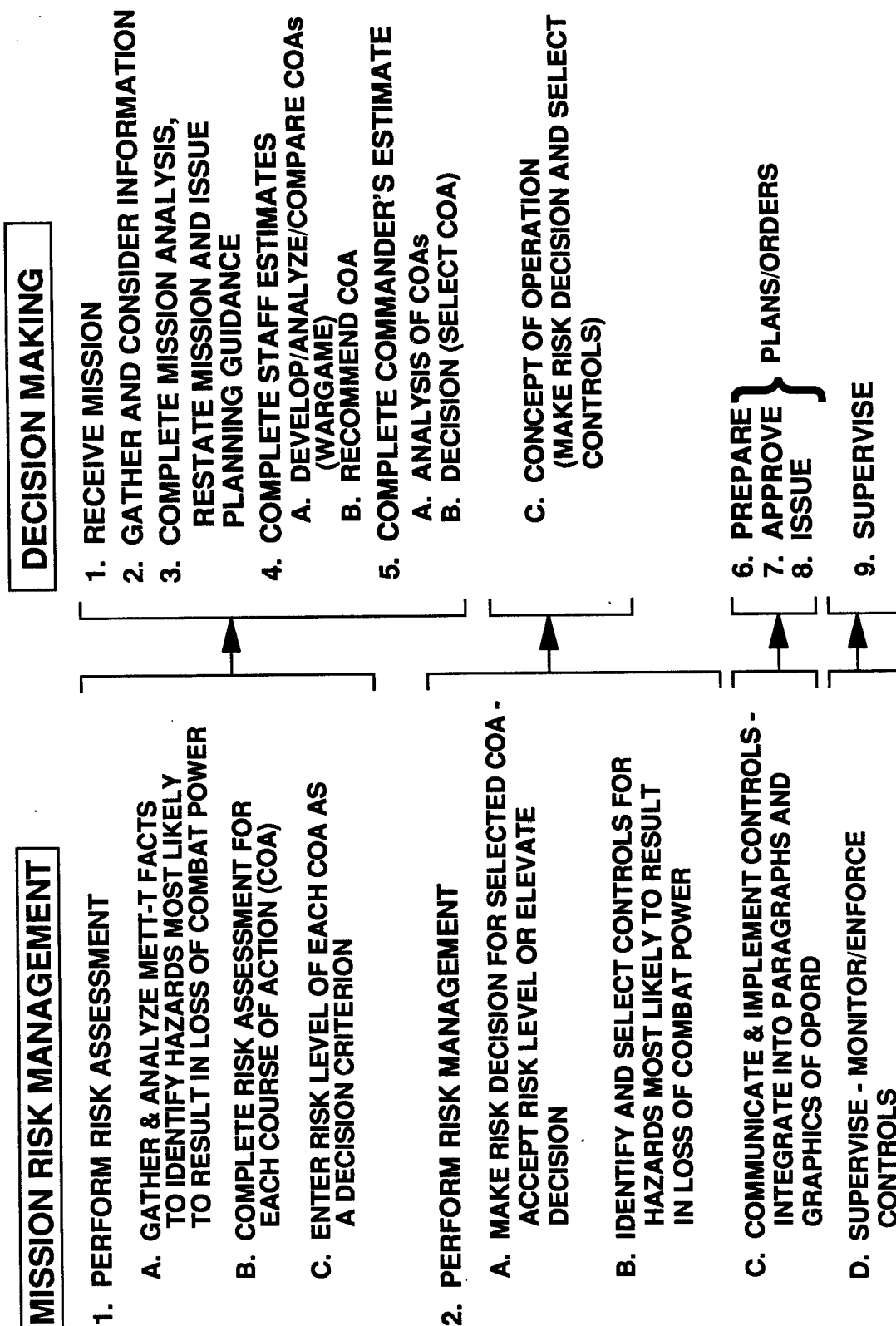
RISK MANAGEMENT ASSESSMENT

RISK MANAGEMENT STEP	ASSESSMENT		COMMENTS
	Sustain	Improve	
BEFORE THE MISSION			
1. ASSESSMENT ACCOMPLISHED?		X	NOT A ROUTINE STEP WITHIN MISSION ANALYSIS
2. HAZARDS IDENTIFIED?		X	ONLY THE MOST OBVIOUS HAZARDS IDENTIFIED. SPORADIC INPUT
3. PROBABILITY ASSESSED?		X	NOT INCLUDED IN COA WARGAMING OF EVALUATION CRITERIA
4. CONTROL OPTIONS IDENTIFIED?	X		OPTIONS WERE PRESENTED TO REDUCE RISK
5. DECISION LEVEL ?	X		RECOMMENDATIONS APPROVED BY BN CDR DURING DECISION BRIEF
6. CONTROLS COMMUNICATED?	X		CONTROLS BRIEFED AS PART OF OPORD
DURING THE MISSION			
7. CONTROLS IMPLEMENTED?	X		CHAIN OF COMMAND EMPHASIS
AFTER THE MISSION			
8. RISK MGMT EFFECTIVE?		X	NO DOCUMENTATION/AAR

FORCE PROTECTION - SAFETY

REASON	INCIDENTS
INDIVIDUAL (Self discipline to standard)	(1) SOLDIERS NOT MAINTAINING 3 POINTS OF CONTACT WHILE MOVING ON TOP OF TRACK VEHICLES.
	(2) SOLDIER SUSTAINED A HEAD WOUND AFTER BEING HIT BY A CAMOUFLAGE POLE.
LEADER (Enforce standards)	(1) PRE CUT CHARGES.
	(2) LACK OF SECONDARY CHECKS RESULTED IN FUSE SETTING ERROR ENDANGERING THE WELL BEING OF FRIENDLY SOLDIERS.
	(3) LACK OF SECONDARY CHECKS RESULTED IN ROUND LANDING IN THE WRONG PLACE DURING A SMOKE MISSION.
TRAINING (Skills to standard)	LACK OF DRIVERS TRAINING RESULTED IN A SITUATION WHICH ENDANGERED
	THE WELL BEING OF SOLDIERS GROUND GUIDING A 5-TON TRUCK WHILE
	BACKING UP.
STANDARDS (Standards/procedures clear & practical)	
SUPPORT (Equipment, personnel, facilities, maintenance, services to standard)	

INTEGRATION OF RISK MANAGEMENT INTO DECISION MAKING PROCESS



Example of Risk Management Integrated Into a Mission Training Plan Task

TASK: COMMAND AND CONTROL THE BATTALION (7-1-1901)(FM 7-20)

ITERATION 1 2 3 4 5 (circle)

TRAINING STATUS T P U (circle)

CONDITION: The brigade-issues an OPORD or FRAGO.

TASK STANDARD:

a. The battalion plan accomplishes the directed mission and specified tasks IAW the brigade commander's concept and intent. The plan is received and understood by the leadership of the battalion, who makes the plan successful. It is coordinated with higher, adjacent, and supporting elements.

b. The plan is as fully prepared as time allows to initiate the mission at the directed time.

c. The battalion controls and synchronizes subordinate and supporting elements so that it accomplishes the mission and protects the force. Hazards are identified and controlled by integrating risk management into the tactical decision making process.

d. The battalion keeps higher, adjacent, subordinate, and supported headquarters informed of essential information key to controlling the battle or making required decisions.

SUBTASKS AND STANDARDS:

GO

NO-GO

+1. Battalion leaders issue the warning order.

a. A complete warning order is issued within 15 minutes of receipt of the brigade order.

b. Warning order is received by all platoons within 45 minutes of issuance of battalion warning order.

*2. Battalion commander analyzes mission and gives initial guidance.

a. Guidance includes restated mission, which includes brigade commander's intent for battalion, and identifies all specified and implied tasks.

Encl 16

b. Guidance includes instructions on information requirements and initially required preparation actions (movement, resupply) to start.

c. **Guidance includes levels within chain of command authorized to accept levels of risk (very high, moderate, low) for risk decisions.**

d. Guidance is given within 30 minutes of receipt of order.

+3. Battalion accomplishes reconnaissance and other actions to gather needed information.

a. Reconnaissance actions begin to physically gain information on the enemy and terrain as early as possible.

b. Commander conducts a personal reconnaissance, when possible. If not, the commander conducts a detailed map reconnaissance.

c. Subordinate leaders perform a personal reconnaissance, when possible. See subordinate company (ARTEP 7-10-MTP) and platoon (ARTEP 7-8-MTP) T&EOs.

d. Staff coordinates with subordinates, higher, and adjacent headquarters to gather information for planning.

e. **Staff analyzes mission to identify hazards.**

f. Staff provides operations, intelligence, and CSS estimates to include all critical METT-T factors and **identified hazards.**

+4. Battalion commander develops and war games courses of action and selects one.

a. Tactically feasible courses of action (include CS and maneuver) are made and war gamed with the available staff (commander, S3, and FSO are best for quick planning sequences; XO, S2, engineer, S4, S3 (Safety) and ADA officer are best in more deliberate situations).

b. Each course of action contains assessment of hazards, risk level, and control measures identified to lower/control the risk.

c. Best course of action is selected.

d. Course of action is war gamed and refined by the command and staff. The staff must understand the concept to produce a sound OPORD and to rehearse.

e. Risk and/or control measures requiring elevation to the higher levels of command for a decision and acceptance are identified and elevated.

*5. Staff develops an OPLAN/OPORD from the commander's guidance.

a. OPLAN/OPORD successfully accomplishes the mission IAW higher commander's intent.

b. Hazard/risk control measures are included in the appropriate paragraphs and graphics.

*6. FRAGOs are issued to subordinates as soon as decisions (to include acceptance of risk) are made.

*7. Battalion commander issues the OPORD/FRAGO.

a. OPORD/FRAGO is issued IAW one-third, two-thirds rule, and makes full use of daylight time.

b. OPORD/FRAGO accomplishes all directed missions and tasks, complies with the brigade commander's intent, controls risks, and is doctrinally sound. (It is based on evaluator judgement, and on comparison of brigade OPORD and battalion OPORD).

c. All subordinate and supporting elements receive the OPORD/FRAGO.

d. OPORD/FRAGO contains task organization, mission, concept, authority for acceptance of risk, and intent for maneuver, supporting fires, and obstacles, missions/tasks for each subordinate, fire support/CSS instructions, and coordinating instructions needed to synchronize the efforts of maneuver forces and CS.

e. If more time is available, the battalion commander issues a fully developed OPOD. (Although an initial FRAGO may be issued to allow subordinates to begin preparation and followed by a full OPOD.)

f. Order is given at a location that reduces travel time, allows observation of the zone/sector, and promotes OPSEC. (Depending upon the METT-T factors, observation of the zone/sector may not be possible.)

g. Battalion commander should perform confirmation brief and war gaming, to include identifying hazards and control measures, after the order to improve subordinate understanding and reaction.

h. Subordinate leaders and staff should perform lateral coordination before leaving the orders site.

+8. Commander and staff coordinate and refine the plan.

a. Time is well used to continue gathering information and to improve the plan (contingency plans, hazard identification and controls, fire plans).

b. New information is disseminated and coordinated with higher, adjacent, and supporting headquarters to include--

- Changes or refinements in plan.

- Information on the enemy in the sector or zone.

- Information that impacts on planning and execution (risk acceptance decisions/hazard controls) of subordinate elements.

- Adjustments/changes in the plans.

+*9. Battalion executes changes in task organization.

a. Main CP coordinates linkup location, time, and responsible element.

b. Attachments/new elements are received at the coordinated location and time; updated on current situation, OPODs, and S0Is; and resupplied.

c. Detachments reach the linkup point at the time and place directed.

+*10. Battalion performs, and commander and staff perform, supervise, and monitor preparations.

a. Command group/XO performs backbriefs with subordinate commanders, leaders, and key staff.

b. Main CP maintains status of preparations.

c. Elements make full use of time to prepare for the operation. Subjective judgement of the evaluator is based on the analysis of preparation charts and available time.

+*11. Battalion sees the battlefield.

a. Command group is positioned to see and move.

b. Companies and other subordinates accurately report critical information on actions and changes in combat status within five minutes. See subordinate MTPs.

c. Main CP collects, analyzes, and passes critical information.

d. Subordinates execute intelligence collection plan. See subordinate element MTPs.

e. **Subordinates integrate risk management process into development of plans and execution of tasks.**

+*12. Battalion leaders command and control the execution.

a. Subordinate elements report enemy and friendly actions, change in status, and any other factor that would require change within three minutes.

b. Battalion leaders win the battle by directing the maneuver of units, controlling direct and indirect fires, **properly integrating risk management into planning and execution**, and directing other CS actions to cope with new METT-T/risk factors. Indicators are:

- Elements not following OPLAN/OPORD are corrected.

- Responses to new METT-T/**hazards** are directed soon after the new situation occurs:

- No friendly casualties inflicted by friendly direct or indirect fires **or other accidents**.

- Number/percentage of direct fire weapons engaging the enemy.

- Number/percentage of indirect weapons engaging enemy.

- Number of enemy casualties.

- Number of friendly casualties.

c. Command and control, and CSS assets are controlled to support maneuver effort. Indicators are:

- Effective CSS, and command and control.

- Command and control or CSS elements not destroyed by enemy direct fires.

d. FRAGOs are clear, concise, **include risk management**, and quickly executed by subordinates.

e. Changes that affect the battle are disseminated within five minutes.

+13. Subordinate commanders, leaders, and staff laterally coordinate actions during the battle.

- All battle actions requiring coordination between elements are coordinated.

+14. Battalion coordinates with adjacent and supporting headquarters.

- All battle actions requiring coordination with other headquarters are laterally and promptly coordinated.

+*15. Battalion reports.

a. Battalion CPs submit all critical and required reports to brigade. They report events to adjacent and supporting elements that impact on them in time for those units to react.

b. **Risk acceptance decisions are elevated to the appropriate level of command for decision.**

*Leader task

+Critical task

Example of Risk Management Integration In OPORD

1. SITUATION:

a. **Enemy forces.** This subparagraph contains information describing the enemy's most probable course of action. This information is expressed in terms of one enemy echelon below the level of the unit preparing the order. A sketch of the enemy course of action is provided in lieu of verbiage. The potential terrorist threat is addressed if appropriate. This paragraph also contains an assessment of terrorist activities directed against US government interests in the area of operations.

Hazards that may adversely affect the mission may also be listed in this subparagraph. The probability of occurrence (if known) and level of risk associated with each hazard should be included. The cumulative affect of multiple hazards should also be addressed (several low risk level hazards may create a high risk level for the mission).

b. **Friendly forces.** This subparagraph includes--

-The mission of the higher unit, the higher commander's intent, level of risk acceptance authority, and the concept of operation.

-Additional subparagraphs which state the missions of the units to the immediate left and right and other critical units whose actions have a significant bearing on the issuing headquarters.

-Additional instructions for minimizing exposure to fratricide, specifically, actions that units must take which are not inherent in existing C2 measures.

c. **Attachments and detachments.** Do not repeat information already listed under task organization. Strive to put all information in task organization. State when attachment or detachment is to be effective if different from when the OPORD is effective. Use the term "remains attached" when units will be or have been attached for some time.

2. MISSION.

Clearly, concisely state the mission. The WHO does WHAT, WHEN, WHERE, and WHY. This should result from essential tasks derived during mission analysis. There are no subparagraphs.

Encl 17

3. EXECUTION.

Intent: Intent (the commander's stated vision) defines the purpose of an operation; the end state with respect to the relationship of the force, the enemy, and the terrain; the accepted risks, and briefly, how the force as a whole will achieve the end state. Briefly state the HOW using appropriate doctrinal terms.

a. **Concept of operation.** (Operation Overlay). This statement expands the commander's intent, particularly his vision of HOW he will conduct the operation and WHO he will assign to perform it. The concept of operations should be the COA statement from the deliberate decision-making process. It should address close, deep, rear, security, force protection, and reserve operations as well as describe the overall form of maneuver and designate the main effort. The commander uses this subparagraph when he feels he must supply sufficient detail to ensure appropriate action by subordinates in the absence of additional communications or further instructions.

After the concept of operation statement, include any subparagraphs needed to clarify the concept and to ensure synchronization. Control measures selected to reduce the risk of identified hazards should be included in these paragraphs. Phase the operation only if required. If phased, be sure subsequent paragraphs clearly outline what is to happen during each phase. The sequence of subparagraphs follows.

(1) Maneuver. Provide a clear, concise narrative of the scheme of maneuver from the beginning to the successful end of the operation. As required, choose items that show the total synchronized battle (which consists of deep, close, rear, and force protection operations) in a sequence that promotes clarity. Designate the main effort and identify when it changes. Address the elements of the battlefield framework. Be sure this paragraph is consistent with the operations overlay, each adding to the clarity of, rather than duplicating or contradicting, the other. Do not duplicate information to be incorporated into unit subparagraphs or coordinating instructions.

(2) Fires. Clarify "scheme of fires" to support the overall concept. Designate which maneuver unit has priority of fires ("main effort"); priority use of low-density munitions; priority as to type of fires for GS units; preparatory fires; and use of illumination, if required. Establish priority of AF support. If the FS support annex is the only one referenced, show it after "(2) Fires". Counter fratricide measures unique to fires may be included in this paragraph.

(3) Counter air operations. Clarify overall concept of counter air operations in support of the scheme of maneuver, if necessary. Include consideration of potential AF counter air support as well as the actual contribution of dedicated AD units. Establish priority of air defense for GS units and provide AD weapons status and warning status. Address counter fratricide control measures.

(4) Intelligence. Clarify effort to support overall concept. Establish priorities of organic collection effort to support scheme of maneuver.

(5) Electronic warfare. Establish priority of collection and jamming as to type of targets required to support the scheme of maneuver.

(6) Engineer. Clarify effort to support overall concept. Indicate priority of support ("main effort"), and provide priority of mobility and survivability aspects as appropriate for GS units. Establish priority of FASCAM support as appropriate. Establish counter fratricide control measures as appropriate and address force protection control measures related to mobility and counter mobility efforts. Delegate or withhold authority to emplace obstacles.

(7) Deception. Clarify effort to support overall concept. State WHO and WHAT would aid the deception effort to help the unit successfully accomplish the mission in accordance with the commander's intent. Also state WHERE, WHEN, HOW, and WHY support units will give aid. Indicate priority of support.

(8) Others as needed. Each subparagraph contains the appropriate control measures selected to reduce risk.

b. Tasks to maneuver units. List all maneuver units that report directly to the headquarters issuing the order in the same sequence as in the task organization, including reserves. Use a separate subparagraph for each maneuver unit. Clearly, concisely state the missions or tasks that each maneuver element of the command is to accomplish, including the aviation maneuver element, if applicable. Only state the tasks that are necessary for comprehension, clarity, and emphasis (to include responsibility for control measures selected to reduce risk to the force). Place tactical tasks that affect two or more units in subparagraph 3d (Coordinating instructions).

c. Tasks to combat support units. Use these subparagraphs only as necessary. However, when using them, list CS units in subparagraphs in the same order as they appear in the task organization. Use CS subparagraphs to list only those specified tasks (responsibility for control measures selected to reduce the risk of identified hazards) that CS units must accomplish and that are not specified or implied elsewhere. Include organization for combat if not clear from task organization.

(1) Fire support.

(a) Air support. Air support includes allocation of CAS sorties, AI mission sorties or nominations. Show tactical air reconnaissance (TAR) sorties here or in the intelligence annex. Also include nonstrategic nuclear weapons target nominations (corps only).

(b) Chemical support.

(c) Field artillery support.

1. General material.
2. Organization for combat.

(d) Naval gunfire support. Counter fratricide measures require special attention during joint operations.

(e) Fire support coordinating instructions. Force protection measures not addressed elsewhere may be included here.

(2) Air defense. Address the following for organic and attached AD units:

-Organization for combat, if not stated in the task organization.

-Missions.

-Priorities for protection, if not clear in the counter air operations subparagraph.

-Counter fratricide measures, if not clear in the counter air operations subparagraph.

(3) Chemical (NBC defense). Address functions or support roles of organic or attached chemical units if not clear in the task organization. Establish priority of decontamination. Assign responsibility for hazard control measures as appropriate.

(4) Combat engineer or engineer support. Be sure support relationships for maneuver units agree with the scheme of maneuver. Do not repeat it if it is in the task organization. When appropriate, assign priorities of work and responsibility for hazard control measures.

(5) Intelligence and electronic warfare. Address the function or support roles of organic or attached combat electronic warfare intelligence (CEWI) or MI units, if not clear in task organization.

(a) Intelligence.

(b) Electronic warfare.

(c) Unmanned aerial vehicle. Designate any special (non-SOP) use on UAVs. Designate where you will place remote video terminals, in not designated in the SOP.

(6) Military police.

(7) Others as needed. Address only tactical tasks not in the SOP or responsibility for hazard control measures not addressed elsewhere. Do not list CSS units unless they have been assigned a tactical task.

d. **Coordinating instructions.** This is always the last subparagraph in paragraph

3. List only instructions applicable to two or more units. Include the following subparagraphs:

(1) Time or condition when an order becomes effective.

(2) CCIR.

(a) PIR.

(b) EEFI.

(c) FFIR.

(3) Antiterrorist actions.

(4) Air defense weapons status.

(5) MOPP.

(6) OEG.

(7) Troop safety criteria

(8) Vehicle recognition signals (daylight and periods of limited visibility).

(9) Any necessary descriptions of phase lines.

(10) Counter fratricide measures (actions in addition to C2 symbology) not covered elsewhere in the order.

(11) Force protection measures (hazard controls) not addressed elsewhere in the order.

(12) Others as needed.

4. SERVICE SUPPORT.

Clearly, concisely state the concept of logistical support. Address service support in the areas shown below and then only as needed to clarify the service support concept. Do not cover SOP actions if the SOP supports the concept of operation. Address only those hazard control measures affecting service support not covered elsewhere in the order. Subparagraphs include the following:

a. **Support concept.** This paragraph provides an overall visualization of the concept of support to include the acceptance of risk and impact of selected control measures. Its intent is to provide non-CSS commanders and their primary staffs a visualization or word picture of how the operation will be logistically supported. If the information pertains to the entire operation, include it in this subparagraph. If it pertains to more than one unit, address it here and change it in the ensuing subparagraphs when needed. This could include--

- A brief synopsis of the support command mission.
- Support command headquarters and/or support area locations, including locations of the next higher logistics bases, if not clearly conveyed in the CSS overlay.
- The next higher level's support priorities and where the unit fits into those priorities.
- Priorities, if they remain the same throughout the operation.
- Units in the next higher CSS organization supporting the unit.
- Significant and/or unusual CSS issues that might impact the overall operation.
- Any significant risks, the command level with authority to accept the risks, the selected control measures designed to reduce the level of the risks.

(1) Before phase.

- Priorities.
 - By unit.
 - For personnel replacements.
 - Maintenance and/or recovery and evacuation priorities (by unit and equipment type).
 - Route use.

- Manning.
- Arming.
- Fueling.
- Fixing.
- Moving. (Priorities should be by unit and commodity.)

(2) During phase. If there are any differences or changes, state them in this paragraph. Use the same subparagraphs listed for the "before phase" with the addition of "critical decision points" after "moving".

(3) After phase. If there are any differences or changes from the before and during phase, state them here. Use the same subparagraphs as "before phase" adding the following after "moving".

- Reconstitution.
- Weapons system replacement operations (WSRO).
- Preparing for future operations.

b. Material and services. Hazards and controls unique to material and services operations are identified and addressed here.

c. Medical evacuation and hospitalization.

d. Personnel.

e. Civil-military cooperation.

f. Miscellaneous.

5. COMMAND AND SIGNAL.

a. Command. State the map coordinates for the TAC, MAIN, REAR, and alternate CP locations and at least one future location for each CP.

b. Signal. List signal instructions.

ACKNOWLEDGE: (Include a statement directing the recipient to acknowledge receipt and understanding.)